

Title (en)
REDUNDANT DIVERSE COLLISION MONITORING

Title (de)
REDUNDANTE DIVERSITÄRE KOLLISIONSÜBERWACHUNG

Title (fr)
SURVEILLANCE DIVERSITAIRE ANTI-COLLISION REDONDANTE

Publication
EP 3706962 B1 20211208 (DE)

Application
EP 18769065 A 20180828

Priority
• EP 17191340 A 20170915
• EP 2018073068 W 20180828

Abstract (en)
[origin: WO2019052803A1] Movable elements (1 to 3, 6 to 8, 10) of a machine are moved by a control device (4) of the machine by controlling drives (5) of the machine. In order to monitor the movement of the movable elements (1 to 3, 6 to 8, 10) for collision with each other or with a stationary element (16), a plurality of monitoring devices (17, 18) check, independently from each other, using a respective computer program (11, 14), whether there is a risk of collision of a movable element (1 to 3, 6 to 8, 10) of the machine with another movable element (1 to 3, 6 to 8, 10) of the machine or with the stationary element (16) in the working space (15). According to whether the monitoring devices (17, 18) detect a risk of collision or not, they intervene, independently from each other, in a corrective manner, in the control of the drives (5) or not, and/or independently emit an alarm message or not. The two computer programs (11, 14) are designed in a diverse manner.

IPC 8 full level
B25J 9/16 (2006.01)

CPC (source: EP US)
B25J 9/1666 (2013.01 - US); **B25J 9/1676** (2013.01 - EP US); **B25J 9/1694** (2013.01 - US); **G05B 2219/39082** (2013.01 - EP); **G05B 2219/39091** (2013.01 - EP)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 3456486 A1 20190320; CN 111093908 A 20200501; CN 111093908 B 20210413; EP 3706962 A1 20200916; EP 3706962 B1 20211208; US 10974385 B2 20210413; US 2021060776 A1 20210304; WO 2019052803 A1 20190321

DOCDB simple family (application)
EP 17191340 A 20170915; CN 201880059867 A 20180828; EP 18769065 A 20180828; EP 2018073068 W 20180828; US 201816647347 A 20180828